CLAIMS

It is claimed:

1   1.   In a wireless network system comprising first
2   and second sub-networks having respective first and second
3   access points, and a wireless unit associated with first
4   access point and having a current network protocol address
5   valid for said first sub-network, a method for said
6   wireless unit to obtain a new network protocol address
7   valid for said second sub-network, comprising:

8   said wireless unit receiving a message having
9   information from which said wireless unit can determine if
10   said current network protocol address is valid for said
11   second sub-network;

12   said wireless unit determining that said current
13   network protocol address is not valid for said second sub-
14   network from said information;

15   said wireless unit associating with said second
16   access point for communicating with said second sub-
17   network;

18   said wireless unit sending a request for said new
19   network protocol address to said second sub-network by way
20   of said second access point; and

21   said wireless unit receiving said new network
22   protocol address from said second sub-network by way of
23   said second access point.

1   2.   The method of claim 1, wherein said information
2   comprises a network protocol address of said second access
3   point.

1   3.   The method of claim 1, wherein said information
2   comprises a subnet mask pertaining to said second sub-
3   network.

1   4.   The method of claim 1, further comprising said
2   wireless unit sending a request to release said current
3   network protocol address to said first sub-network.

1   5.   The method of claim 2, wherein said determining
2   that said current network protocol address is not valid
3   for said second sub-network comprises:
4   said wireless unit determining if it has previously
5   stored said network protocol address; and
6   said wireless unit determining that said current
7   network protocol address is not valid for said second sub-
8   network based on information associated with said
9   previously stored network protocol address.

1   6.   The method of claim 2, wherein said determining
2   that said current network protocol address is not valid
3   for said second sub-network comprises:
4   said wireless unit determining if it has previously
5   stored said network protocol address; and
6   said wireless unit assuming that said current network
7   protocol address is not valid for said second sub-network
8   if it has not previously stored said network protocol
9   address.

1   7.   A wireless unit for communicating with a wired
2   backbone network having first and second of sub-networks
3   by way of respective first and second access points,
4   comprising:
5   a wireless transceiver to communicate with said
6   first and second access points via a wireless medium;
7   a memory to communicate current network protocol
8   address valid for said first sub-network; and

9   a logic circuit to receive a first message from
10 said first access point by way of said wireless receiver,
11 wherein said first message includes information from which
12 said logic circuit can determine if said current network
13 protocol address is valid for said second sub-network,
14 said logic circuit also capable of transmitting a request
15 for a new network protocol address valid for said second
16 sub-network if said logic circuit determines if said
17 current network protocol address is not valid for said
18 second sub-network.

1   8.   The wireless unit of claim 7, wherein said
2 information comprises a network protocol address of said
3 second access point.

1   9.   The wireless unit of claim 7, wherein said
2 information comprises a subnet mask pertaining to said
3 second sub-network.

1   10. The wireless unit of claim 7, wherein said logic
2 circuit is capable of transmitting a request to release
3 said current network protocol address.

1   11. The wireless unit of claim 7, wherein said logic
2 circuit is capable of determining if said new network
3 protocol address has been previously stored in said
4 memory, and determining whether said new network protocol
5 address is valid based on information stored in said
6 memory that is associated with said previously stored new
7 network protocol address.

1   12. The wireless unit of claim 7, wherein said logic
2 circuit is capable of determining if said new network

3   protocol address has been previously stored in said
4   memory, and transmitting said request for said new network
5   protocol address valid if said new network protocol
6   address has not been previously stored in said memory.

1   13. An access point, comprising a logic circuit for
2   transmitting a message to one or more wireless units,
3   wherein said message includes information from which said
4   one or more wireless units can determine if a current
5   network protocol address is valid on the sub-network which
6   said access point is on.

1   14. The access point of claim 13, wherein said
2   information comprises a network protocol address for said
3   access point.

1   15. The access point of claim 13, wherein said
2   information comprises a subnet mask of said sub-network.

1   16. The access point of claim 13, wherein said
2   message further includes information which said one or
3   more wireless units can make roaming decision based on.

1   17. A wireless network system, comprising:
2   a wired backbone network comprising first and
3   second sub-networks data coupled together by way of a
4   network device;
5   a first access point on said first sub-network;
6   and
7   a second access point on said second sub-network,
8   comprising a logic circuit for transmitting a message to
9   one or more wireless units, wherein said message includes
10 information from which a wireless unit can determine if a

11   current network protocol address assigned to said wireless

12   unit is valid for said second sub-network.

1   18.   The wireless network system of claim 17, wherein

2   said information comprises a network protocol address for

3   said access point.

1   19.   The wireless network system of claim 17, wherein

2   said information comprises a subnet mask of said sub-

3   network.

1   20.   The wireless network system of claim 17, wherein

2   said message further includes information which said one

3   or more wireless units can make roaming decision based on.

1   21.   In a wireless network system comprising first

2   and second sub-networks having respective first and second

3   access points, and a wireless unit associated with said

4   first access point and having a current network protocol

5   address valid for said first sub-network, a method for

6   said wireless unit to determine whether to associate with

7   said second access point, comprising:

8   said wireless unit receiving a first information from

9   said first access point from which said wireless unit can

10   determine a first signal quality of a wireless

11   communication link between said wireless unit and said

12   first access point;

13   said wireless unit receiving a second information

14   from said second access point from which said wireless

15   unit can determine if said current network protocol

16   address is valid for said second sub-network;

17   said wireless unit receiving a third information from

18   said second access point from which said wireless unit can

19   determine a second signal quality of a wireless
20   communication link between said wireless unit and said
21   second access point; and

22   said wireless unit making a decision whether to
23   associate with said second access point based on said
24   first and second signal qualities, and whether said
25   current network protocol address is valid for said second
26   sub-network.

1   22. The method of claim 21, wherein said wireless
2   unit makes a decision to associate with said second access
3   point if said second signal quality is above said first
4   signal quality by a factor.

1   23. A wireless unit for communicating with a wired
2   backbone network having first and second of sub-networks
3   by way of respective first and second access points,
4   comprising:

5   a wireless transceiver to communicate with said
6   first and second access points via a wireless medium;

7   a memory to communicate current network protocol
8   address valid for said first sub-network; and

9   a logic circuit to:

10   receive a first information from said first
11   access point from which said wireless unit can determine a
12   first signal quality of a wireless communication link
13   between said wireless unit and said first access point;

14   receive a second information from said
15   second access point from which said wireless unit can
16   determine if said current network protocol address is
17   valid for said second sub-network;

18   receive a third information from said
19   second access point from which said wireless unit can
20   determine a second signal quality of a wireless

21   communication link between said wireless unit and said
22   second access point; and

23   determine whether to associate with said
24   second access point based on said first and second signal
25   qualities, and whether said current network protocol
26   address is valid for said second sub-network.

1   24. The wireless unit of claim 23, wherein said
2   wireless unit makes a decision to associate with said
3   second access point if said second signal quality is above
4   said first signal quality by a factor.